

T. O. M. Industries LLC
(Two Old Men)

What is Dredging? The Sedimentation Process

Rivers carry suspended sand and soil along with them as they flow toward the ocean. The higher the water velocity, the greater the speed of the water, the greater its energy and capacity to move soil, sand, and even rocks along with it. When the velocity of the water decreases, it loses energy and the non-floating materials drop to the bottom of the river channel. As stream or river velocity slows, heavier materials like sand and gravel, will settle out first. In rivers and streams that experience periods of high flow during the year, the formation of sand or gravel bars is common. Because they are so light, silt and clay particles do not settle out until the river has lost most of its energy and velocity. In still water, harbors, and backwater areas, like bayous and oxbows, silts and clay will settle out. Dredging works well in some places but it turns the water into mud and kills the Aquatic also the neglect comes to the watersheds our drinking water and resevoirs are not too capcity, my methed makes it possible to remove sediments without making mud.

("lakes, reservoir's, and oceans").

Material that falls to the bottom of a liquid is called sediment. If enough sediment deposits to build a shallow spot on the river or ocean bottom etc., it forms shoals. A shoal in a navigation channel that causes the bottom to become shallower than is shown on nautical charts is a hazard because the depth of water storage is not there.

First Of its Kind

People have been dredging channels in one way or another since primitive people began to irrigate crops. Until the early 1900s the two most common types of mechanical dredges were dipper dredges and clamshell dredges. They are names for the type of scooping buckets they employ. Dredges were crude and barely effective in keeping channels and harbors clean. Keeping the dredge in position in the channel, knowing how deep a channel was being dug, and even making accurate surveys of the completed channel, were a mixture of art and science. Our new Submersible Sediment Removal System is a first of its kind. It employs new water flow technology, has the added advantage when linked with current O. T. C. electronics technologies of a large spectrum being useable at great depth or at long range and in a wide variety of industrial applications. After the initial excavation needed to establish a channel, the periodic dredging that must be done to keep it clear and maintain flow capacity, this is called maintenance.

Beneficial Uses of Dredged Material

Dredging is necessary to maintain our nation's system of waterways. Nearly 400 million cubic yards of material is dredged each year. Consequently, about 400 million cubic yards of material must be placed in approved disposal sites or else used for another environmentally acceptable purpose. Finding and taking advantage of beneficial uses for dredged material makes good sense.

P O Box 40151 Grand Junction CO. 81504 Bill [Personal Phone/Ex. 6] Chris [Personal Phone/Ex. 6]
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Drag-line Dredge Clamshell Dredge

This is NOT our way of Sediment removal

This process can't be used in potable drinking water (Reservoir's), it's too muddy as particles are stirred up in Lakes and Reservoir's they are becoming storage for sand dunes!

Our goal is to restore the capacity of water storage in all of the ABOVE
To whom it may concern:

I am sure you are aware of the human's daily need of drinking water, have you considered however that every bite of food you have ever eaten was made possible by water?

The human demand for water will be greater tomorrow than it is today and considering that our demand increases daily we need to understand that our supply of usable potable water is limited, thusly consideration of conservation and prudent use would seem at this time to be a wise choice.

My name is Chris J. Garcia I build cleaning tools that are skimmers that can pick up contaminants from any surfaces be it above ground, water surface or underwater. The underwater Sediment Remover System will remove Sediments from the bottom of any body of water. My interests are to increase the capacity of our drinking water Bill and I make up the Two Old Man. I need some very special help for this project because it's too big of a project for me. This is where you come in, if you are willing to help me. Here is an example, our water supplies most of the Mesa County drinking water sheds is not up to capacity. I'll discuss one of the reservoirs in the Mesa County that I know about, and how their capacity level is not there because of sediments and this is the way it is throughout the Country.

This reservoir was built in the early 1960's. This One (1) is one of many reservoirs its hundred and thirty feet deep (130') it stores 164,000-acre feet of water, the last sounding they took it read ninety feet (90'). That information is saying that the bottom has come up forty feet with silt (40' with sediments). They no longer have the 164, 000 acres feet of water. Because it has been reduce with silt and they have not done any maintenance since the reservoirs were built; that's over fifty years (50 years) this information was given to me from the Manager in June 28th 2013.

That's one reason why there is a shortage of water through out the country because there is no maintenance done on our ponds, lakes, reservoirs and dams,

This Reservoir

This is our way of Sediment removal
the clean way no mud



PS

If you don't believe me you can ask Bill [Personal Phone/Ex. 6]
Esoteric Theorist Analytic World Consultant

P O Box 40151 Grand Junction CO. 81504 Bill [Personal Phone/Ex. 6] Chris [Personal Phone/Ex. 6]

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- It saves tax dollars that would otherwise be spent on finding and managing disposal sites.
- It avoids habitat impacts that disposal may cause.
- It saves capacity in existing disposal sites.
- It can be a low-cost alternative to purchasing expensive fill for construction projects.
- It can be used to enhance or restore habitat.

Parks and Recreation - Recreation on dredged material containment sites is one of the most common land uses of dredged material sites, in actual acres. This is not surprising, since there is a high demand for recreational sites in urban areas where much dredging occurs. These converted dredged material sites typically provide public access for water-related recreational activities. The nature of recreation sites - lots of open space and lightweight structures - is especially suited to fine-grained dredged material, which is generally not good foundation material for more substantial structures. When planned and developed thoughtfully, recreational sites can become a valuable community asset, not only for the recreation opportunities they provide for residents, but for the business opportunities that recreation activities generate.

Agriculture, Forestry, and Horticulture - The use of dredged material sites as pasture land and cropland has been successfully combined with active dredging projects. Dredged material has also been used occasionally to improve farm soil. Inactive dredged material sites have been used for forestry, but forestry use of active sites is not very practical. The length of time needed to grow even quickly yielding stands of trees, like Christmas trees, is longer than the time between dredging cycles.

Potable water is water which is fit for consumption by humans and other animals. It is also called drinking water, in a reference to its intended use. Water may be naturally potable, as is the case with pristine springs, or it may need to be treated in order to be safe. In either instance, the safety of water is assessed with tests, which look for potentially harmful contaminants. The issue of access to potable water is very important. In developed countries, people may not put a great deal of thought into the source of their water. In many First World nations, citizens can turn on a tap for fresh, potable water which may also be enriched with things fluoride like for health. In developing countries, however, and especially in Africa, a large proportion of the population does not have access to safe water.

Water, which is not safe to drink, can carry diseases and heavy metals. People who consume this water will become ill, and there is a risk of death. Unfortunately, even in areas where the water is known to be unsafe, people may drink it anyway, out of desperation. The lack of potable water is often accompanied by other lapses in sanitation, such as open sewers and limited garbage collection. Many of these public health issues impact the poor more than anyone else. Choices in the use of fresh water.

With one in eight people in the world not having access to safe water it is important to use

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this resource in a prudent manner. Making the best use of water on a local basis probably provides the best solution. Local communities need to plan their use of fresh water and should be made aware of how certain crops and animals use water.

As a guide the following tables provide some indicators.

Table 1 Recommended basic water requirements for human needs.

Activity	Minimum liters per day
Drinking Water	5
Sanitation Services	20
Bathing	15
Cooking and Kitchen	10

Table 2. Water Requirements of different classes of livestock

Animal	Average Gallons per day	Range gallons per day
Dairy cow	20	15-25
Cow-calf pair	15	2-20
Yearling cattle	10	6-14
Horse	10	8-14
Sheep	2	2-3

Table 3 Approximate values of seasonal crop water needs.

Crop	Crop water needs mm / total growing period
Banana	1200-2200
Barley/Oats/Wheat	450-650
Cabbage	350-500
Citrus	900-1200
Onions	350-550
Pea	400-800
Potato	500-700
Sugar Cane	1500-2500
Tomato	

The following is a partial reservoirs in the United States. There are an estimated 75,000 dams in the United States, impounding 600,000 mi. (of river or about 17% of rivers in the nation.

The National Inventory of Dams defines a major dam as being 50 feet tall with a storage capacity of at least 5,000-acre feet or of any height with a storage capacity of 25,000-acre feet or better in larger Dams and Reservoirs.

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